

Reuse/Recycle of the Solid Waste Management in India

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Abstract - The waste generation is increasing day by day as a by-product of economic development which led to various subordinate legislations for regulating the types of disposal and dealing with the waste generation which is made under the umbrella law of Environment Protection Act, 1986 (EPA). By overall evaluation about 80% of solid waste is utilized by the processes reusing and recycling.

Key Words: reusing, recycling

1. INTRODUCTION

After China, India is the second largest country having a large amount of population of the world's total population. A total population of India is divided as 68% lives into rural areas, while remaining 32% lives in urban areas. India is counted as one of the most developing countries in the industrialization phase, which also contribute to urbanization. Also, it is one of the fastest growing economies in the world with 7.30% GDP. Higher GDP will result in improved living standards.

1.1 Reuse:

The sustained growth in reuse efforts and sustained interest of the reuse industry derives in large measure from the solid waste reduction hierarchy which is: Reduce, Reuse, and then recycle. First, the quantity of solid waste is reduced, and then reused and finally resort to recycling. Recyclers kept materials out of the landfill by different operations such as collection, segregating, processing and finally manufacturing the newly collected goods into the new products. The process of keeping materials out of the stream of the waste while passing out the goods collected on the others is termed as Reuse, which is done by the Reusers.

1.2 Recycle:

Recycling is the key of green and healthy environment. As recycling utilizes the waste product and preserves the Rainforests by minimizing the need of raw materials. Recycling also reduces the amount of energy required in making products from raw materials as it requires less energy in it, resulting in less consumption of natural resources. The environment can be preserved by the awareness of peoples and for that the awareness programs to save the environment.

Some items that can be recycled or reused		
Paper	Old copies Old books Paper bags Newspapers Old greeting cards Cardboard box	
Plastic	Containers Bottles Bags Sheets	
Glass and ceramics	Bottles Plates Cup Bowls	
Miscellaneous	Old cans Utensils Clothes Furniture	

2. LITERATURE REVIEW:

2.1 BLUE AND GREEN DUSTBINS:

Waste can be generated in any field like from industries, domestic, offices, shops, etc. The blue and green dustbins are adopted by govt. of India. Blue and green dustbins are responsible for segregation of wastes.

Green dustbins used for segregation of wet wastes or reduces wet wastes while blue dustbins used for reduces dry wastes.

Some of the practices of Solid Waste Management In India are:

- Domestic wastes are thrown on streets.
- Trade wastes are thrown on roads / streets.
- Construction waste left on the sites.
- Disposal of biomedical waste into municipal waste stream
- Industrial waste often disposed of in open areas

Earlier in waste management, recyclable wastes were not segregated properly at source. Nowadays green and blue

dustbins are used for this. Initial waste collection is not done at place of generation. Due to the inappropriate design & location of municipal waste storage depots, results in littering of garbage. Street sweeping is also not done regularly. Open vehicle like trolleys are used for transportation of waste products. Crude dumping is used for the final disposal of the waste. The recyclable waste is collected from the municipal bins and waste dumping sites with the help of waste picker that reduces the insanitary conditions.

3. MAGNITUDE OF PROBLEMS:

An average increase in waste generation is about 6% per annum. 1.3% per annum waste is still increasing and 3-4% per annum is increasing in urban areas. Around 640 million tons of municipal solid waste is produced in India. The average rate of waste generation is 0.5 kg per capita per day in 0.2 million plus towns.

Some of the recycled materials and their uses are:-

(A). Fly ash

- Cement
- Plasticizer
- Raw material in OPC
- Manufacture of oil well cement
- Precast fly ash concrete building units
- Stabilization of soil
- Filler in mines, in bituminous concrete

(B). Blast furnace slag

- Non-Portland cement
- Aggregate in concrete
- In refractory
- Manufacture of slag cement

(C). ferrous alloy

- Structural fill
- In making pozzolana metallurgical cement

(D) By gypsum

- Making gypsum plaster
- Set controller in manufacture of Portland cement
- Mineralizes

(E) Lime sludge

- Recycling in paper industry
- Manufacture of building lime
- Manufacture of masonry cement

(F) Chromium sludge

- Manufacture of colored cement
- As a raw material component in cement manufacture

(G) Aluminum cans

- In making sheets
- In manufacturing cans

(H) Glass

- To produce new glass container
- To manufacture glass bottles

4. RESULT AND DISCUSSION:

A balanced and harmonious relationship between nature and living beings, especially human beings, on this earth is necessary for a continued sustenance and development of in this world. As civilization advanced, man directly or indirectly interfered with the natural environment.

CONCLUSION:

In India, the generation of solid waste is continuously increasing due to consistent & hasty growth in populations, rapid economic development, industrialization and urbanization. Unfortunately, no Indian city can claim 100% efficiency in practice and management of municipal solid waste, which leads to serious environmental problems and further results in unsustainability. This situation become havoc due to absence of proper regulation, laws for disposal & treatment of solid waste, lack of planning, lack of financial resources, old equipment & technology and societal dispiritedness. Hence to ensure sustainability in a holistic manner, Indian cities should adopt integrated solid waste management with proper laws and citizen participation.

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